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10/044,446	01/10/2002	Peter A. Hawkins	PW 0249758 P13079	8617

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EXAMINER	
ZUNIGA, JACKIE	

ART UNIT	PAPER NUMBER
2458	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/044,446	HAWKINS ET AL.	
	Examiner	Art Unit	
	JACKIE ZUNIGA	2458	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-30 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Hawkins et al., (hereinafter Hawkins), U.S. Publication No. 2003/0115397.

4. **As per claim 1,** Hawkins discloses a star intelligent platform management bus topology, comprising:

A central baseboard management controller, coupled to a plurality of management controllers, to provide autonomous monitoring, event logging, and recovery control [paragraphs 0007, 0008, 0010, 0011, central management agent providing monitoring of the FRUs using the FRU-type-specific management buses; sending alerts in case of a failure and taking corrective actions];

The plurality of management controllers, to receive a command message from the central baseboard management controllers, to gather information from a device, to

package the information, and to transmit a response message with the information to the central baseboard management controller [paragraphs 0007, 0011, 0017, Field Replaceable Units (FRUs); collecting management information to be transmitted to the central management agent; It is inherent that the FRUs will package the information into a suitable format for the transmission of information via the FRU-type- specific buses];

A plurality of intelligent platform management buses that provide a communication Connection between the central baseboard management controller and the plurality of management controllers [paragraphs 0007, 0015, a number of field replaceable unit specific (FRU-type-specific) management buses that couple the central management agent to the field replaceable units], wherein the star intelligent platform management bus topology is adapted to provide fault isolation; provide separate address domains; and provide multiple owner security within a chassis [paragraphs 0003, 0020, a system management buses arrangement for monitoring and controlling the health of the system hardware including identifying a failed hardware component, and the system physical security] .

The limitation of providing autonomous monitoring, event logging, and recovery control; and the limitation wherein the topology is adapted to providing fault isolation; separate address domains; and multiple owner security within a chassis; are not given any patentable weight since they simply express the intended result of the process steps positively recited. See MPEP § 2111.04 [R-3].

5. **As per claim 2,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein the central baseboard management controller includes or is connected to a non-volatile storage unit, and the non-volatile storage unit has a system event log, a sensor data record depository, and a baseboard field replaceable unit information module [paragraph 0010, the central management unit may log information on system hardware inside a memory device].

6. **As per claim 3,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein the central baseboard management controller includes or is connected to sensors and control circuitry to monitor voltages, temperatures, power, fans, and reset control [paragraphs 0003, 0011, monitor and control the health of system hardware, system temperatures, voltages, fans, power supply, etc.].

7. **As per claim 4,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein the central baseboard management controller is the gateway between system management software and platform management hardware [paragraph 0011, central management agent may be an IPMI-defined baseboard management controller (BMC); it is well known in the art that a BMC manages the interface between the system management software and platform management hardware].

8. **As per claim 5,** Hawkins discloses the star intelligent platform management bus topology of claim 4,

Wherein the platform hardware management includes the plurality of intelligent platform management buses and an intelligent chassis management bus, and the intelligent chassis management bus is used for power and reset control, chassis status, events, and field replaceable unit inventory [paragraph 0007, a separate system management bus and a plurality of FRU-type-specific management buses].

9. **As per claim 6,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein the plurality of management controllers resides on at least one chassis module [fig. 1, paragraphs 0009, 0020, a chassis is containing one or more computing units including the central management agent as well as a plurality of different types of FRUs].

10. **As per claim 7,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein the plurality of management controllers gather information from sensors and package the information in suitable transmission formats for sending via the plurality of intelligent platform management buses, which are adapted to carry streams of data [paragraphs 0009, 0011, 0016, FRUs collecting management information to be

transmitted to the central management unit; It is inherent that the FRUs will package the information into a suitable format for the transmission of information via the FRU-type-specific buses].

11. **As per claim 8,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein each of the plurality of management controllers is coupled to one of the plurality of intelligent platform management buses [fig. 1, 3, paragraphs 0008, 0013, 0020, there is only one type of FRU coupled to each management bus].

12. **As per claim 9,** Hawkins discloses the star intelligent platform management bus topology of claim 8,

Wherein at least one of the plurality of management controllers is replaced with at least one remote baseboard management controller so that the central baseboard management controller appears as a satellite management controller without baseboard management controller functionality to the at least one remote baseboard management controller [paragraphs 0011, 0013, 0022, a central management agent may be an FRU].

13. **As per claim 10,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein if one of the plurality of management controllers fails in such a way that it corrupts the intelligent platform management bus to which it is coupled,

communication is lost with only the failed management controller so as to provide fault isolation [paragraphs 0013, 0018, according to the arrangement wherein the management buses are specified to the FRU; if a failure is detected the central management agent will easily determine the root cause and that way the removal of an individual FRU and/or management bus does not cause the computer system to stop and may not directly impact system availability].

14. **As per claim 11,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein the baseboard management controller and the plurality of management controllers share addresses [paragraph 0011, central management agent may be an FRU].

15. **As per claim 12,** Hawkins discloses the star intelligent platform management bus topology of claim 1,

Wherein each of a plurality of modules is isolated so that a controller of a module communicates directly with only a central baseboard management controller associated with the chassis to provide multiple owner security [paragraphs 0003, 0020, each component is coupled to the central management agent; providing system physical security].

16. **As per claim 13,** Hawkins discloses an intelligent management platform interface that allows communication between a central processing unit and a plurality of controllers [paragraphs 0011, 0020], comprising:

An intelligent platform management interface that provides monitoring and control functions [fig. 1, paragraphs 0010, 0011, central management agent may be a central management entity, such as an intelligent platform management interface {IPMI) for monitoring and controlling components];

A plurality of intelligent platform management buses for communication to and between the plurality of controllers and for extending management control, monitoring, and event delivery within a chassis [fig. 1, paragraphs 0007, 0015, a plurality of management buses that couple the central management agent to the field replaceable units that may be used to communicate management information within the chassis 100];

An intelligent chassis management bus for chassis and emergency management functions including power and reset control, chassis status, events, and inventory [paragraphs 0003, 0007, 0022, a separate system management bus and a plurality of FRU-type-specific management buses];

A central baseboard management controller, connected to a plurality of management controllers via the plurality of intelligent platform management buses [paragraphs 0007, 0008, 0010, 0011, central management agent, which maybe an IPMI-defined management controller (BMP), providing monitoring of the FRUs using the

FRU-type-specific management buses; sending alerts in case of a failure and taking corrective actions];

Wherein the plurality of intelligent platform management buses are arranged in a star topology to provide fault isolation, separate address domains, and multiple owner security [paragraphs 0003, 0020, a system management buses arrangement for monitoring and controlling the health of the system hardware including identifying a failed hardware component, and the system physical security] .

The limitation wherein the topology is adapted to providing fault isolation; separate address domains; and multiple owner security within a chassis; is not given any patentable weight since they simple express the intended result of the process steps positively recited. See MPEP § 2111.04 [R-3].

17. **As per claim 14,** Hawkins discloses the intelligent platform management interface of claim 13,

Wherein the plurality of intelligent platform management buses are inter-integrated circuit bus based [paragraph 0015, management buses such as Inter-IC (I^2C) buses].

18. **As per claim 15,** Hawkins discloses the intelligent platform management interface of claim 13,

Wherein the central processing unit requests and receives information from an intelligent platform management interface event log through the central baseboard

management controller [fig. 3, paragraph 0021, the central management agent communicates management information to the central processing unit].

19. **As per claim 16,** Hawkins discloses the intelligent platform management interface of claim 15,

Wherein the central processing unit inquires about changes in the event log since a previous inquiry [fig. 3, paragraph 0021, as it is well know with IPMI, a CPU makes requests and received information from an IPMI through the BMC (central management agent), whereby the CPU only inquires about changes in the log since the previous inquiry].

20. **As per claim 17,** Hawkins discloses the intelligent platform management interface of claim 13,

Wherein the central baseboard management controller is connected to a system bus on a computer chassis motherboard through a system interface [paragraphs 0007, 0009, 0011, management buses that are coupled to the central management agent in the chassis].

21. **As per claim 18,** Hawkins discloses the intelligent platform management interface of claim 17,

Wherein the motherboard is connected to a network controller and a network connector [fig, 1, paragraph 0012].

22. **As per claim 19,** Hawkins discloses the intelligent platform management interface of claim 13,

Wherein the intelligent chassis management bus is RS-485 based and is coupled to RS-485 transceivers [paragraph 0015, the FRU-type-specific management bus may be any type of known management buses such as Inter-IC (I^2C) bus, an intelligent platform management bus (IPMB), or an RS-485 bus which conforms to the RS-485 standard, etc.].

23. **As per claim 20,** Hawkins discloses the intelligent platform management interface of claim 13,

Wherein if at least one of the plurality of management controllers fails, the star topology allows continued communication between the central baseboard management controller and any non-failing management controller from the plurality of management controllers [paragraphs 0013, 0018, according to the arrangement wherein the management buses are specified to the FRU; if a failure is detected the central management agent will easily determine the root cause and that way the removal of an individual FRU and/or management bus does not cause the computer system to stop and may not directly impact system availability].

24. **As per claim 21,** Hawkins discloses the intelligent platform management interface of claim 13,

Wherein the star topology provides separate address domains to the central baseboard management controller and the plurality of management controllers thus allowing address sharing [paragraph 0011, central management agent may be an FRU].

25. **As per claim 22,** Hawkins discloses the intelligent platform management interface of claim 13,

Wherein the star topology isolates each of a plurality of modules such that a controller of a module only communicates directly with the central baseboard management controller for the chassis [paragraphs 0003, 0020, each component is coupled to the central management agent; providing system physical security].

26. **As per claim 23,** Hawkins discloses a method of configuring a star intelligent platform management bus topology, comprising:

Providing a central baseboard management controller [fig. 1, central management unit 105];

Providing a first management controller [fig. 1, paragraph 0009, a plurality of different types of Field Replaceable Units (FRUs)];

Connecting the central baseboard management controller to the first management controller via a first intelligent platform management bus [fig. 1, 3, paragraph 0020, coupling the first type of components to the central management agent via a first component type specific management bus];

Providing a second management controller [fig. 1, paragraph 0009, a plurality of different types of Field Replaceable Units (FRUs)];

Connecting the central baseboard management controller to the second management controller via a second intelligent platform management bus [fig. 1, 3, paragraph 0020, coupling a second type of components to the central management agent via a second component type specific management bus].

27. **As per claim 24,** Hawkins discloses the method of claim 23,

Wherein the first management controller and the second management controller reside on at least one chassis module and accept command messages from the central baseboard management controller [fig. 1, paragraphs 0009, 0020, a chassis is containing one or more computing units including the central management agent as well as a plurality of different types of FRUs], gather information from sensors, package the information into a suitable transmission format, and transmit a response message with the information over the first and second intelligent platform management buses to the central baseboard management controller [fig. 3, paragraphs 0009, 0011, 0020, FRUs collecting management information to be transmitted to the central management unit; It is inherent that the FRUs will package the information into a suitable format for the transmission of information via the FRU-type- specific buses].

28. **As per claim 25,** Hawkins discloses the method of claim 24,

Wherein the first management controller and the second management controller send event messages to the central baseboard management controller [paragraphs 0007, 0011, 0020, Field Replaceable Units (FRUs); collecting management information to be transmitted to the central management agent].

29. **As per claim 26,** Hawkins discloses the method of claim 23,

Wherein the central baseboard management controller manages an intelligent platform management interface event log, monitors voltages, temperatures, power, reset control, and fans, and manages a non-volatile storage for data records [fig. 3, paragraphs 0003, 0011, 0021, monitor and control the health of system hardware, system temperatures, voltages, fans, power supply, etc.].

30. **As per claim 27,** Hawkins discloses the method of claim 26,

Wherein a central processing unit requests and receives information from the intelligent platform management interface event log through the central baseboard management controller and inquires about changes in the event log since a previous inquiry [fig. 3, paragraph 0021, the central management agent communicates management information to the central processing unit; as it is well know with IPMI, a CPU makes requests and received information from an IPMI through the BMC (central management agent), whereby the CPU only inquires about changes in the log since the previous inquiry].

31. **As per claim 28,** Hawkins discloses the method of claim 23,

Wherein the star intelligent platform management bus topology provides fault isolation by maintaining continued communication between the central baseboard management controller and one of the first management controller and the second management controller if one of the first management controller and the second management controller fails [paragraphs 0013, 0018, according to the arrangement wherein the management buses are specified to the FRU; if a failure is detected the central management agent will easily determine the root cause and that way the removal of an individual FRU and/or management bus does not cause the computer system to stop and may not directly impact system availability].

32. **As per claim 29,** Hawkins discloses the method of claim 23,

Wherein the star intelligent platform management bus topology provides separate address domains to the central baseboard management controller, the first management controller, and the second management controller to allow address sharing [paragraph 0011, central management agent may be an FRU].

33. **As per claim 30,** Hawkins discloses the method of claim 23,

Wherein the star intelligent platform management bus topology isolates each of a plurality of chassis modules such that a controller of a module only communicates directly with the central baseboard management controller for the chassis module to

provide multiple owner security [paragraphs 0003, 0020, each component is coupled to the central management agent; providing system physical security].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACKIE ZUNIGA whose telephone number is (571)270-7194. The examiner can normally be reached on Monday - Friday 7:30 A.M to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Avellino can be reached on (571)272-3905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.Z./

Examiner, Art Unit 2458

/Joseph E. Avellino/
Supervisory Patent Examiner, Art Unit 2458